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银簇合物的合成、晶体结构及其性质研究

Synthesis, Crystal Structures and Properties of Silver
Clusters

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论文用词简写

| 简写 | 名称或分子式 |
|------------------|--|
| ^t Bu | tert-butyl group |
| Pr ⁱ | isopropyl group |
| CH | cyclohexyl group |
| Py | pyridine |
| Ph | phenyl group |
| PPh ₃ | Triphenyl phosphorous |
| dppp | Bis(diphenylphosphino)propane |
| dppb | (Bis(diphenylphosphino)butane |
| dppm | Bis(diphenylphosphino)methane |
| tfa | trifluoroacetate |
| dfa | difluoroacetate |
| pfa | pentafluoropropionate |
| hfDa | hexafluoroglutarate |
| OTf | triflate |
| DMAP | dimethylaminopyridine |
| bpy | bipyridine |
| C | cytosine |
| Cyt | cytidine |
| MC | metal-centered |
| MMLCT | metal to metal to ligand charge transfer |
| 1D | One-dimensional |
| 2D | Two-dimensional |
| 3D | Three-dimensional |
| X | halogen |

厦门大学博硕士论文摘要库

化合物索引

| 序号 | 简写 | 名称或分子式 |
|----|--|---|
| 1 | Ag₉DMAP·OTf | [Ag ₉ (DMAP) ₉ (C≡C ^t Bu) ₆](OTf) ₃ |
| 2 | Ag₉DMAP·BF₄ | [Ag ₉ (DMAP) ₉ (C≡C ^t Bu) ₆](BF ₄) ₃ |
| 3 | Ag₁₂bpy | Ag ₁₂ (bpy) ₂ (SPr ⁱ) ₆ (tfa) ₆ (CH ₃ CN) ₂ |
| 4 | Ag₁₂DMAP | Ag ₁₂ (DMAP) ₆ (SPr ⁱ) ₆ (tfa) ₆ |
| 5 | Ag₁₂dppp | Ag ₁₂ (SPr ⁱ) ₆ (tfa) ₆ (dppp) ₂ (CH ₃ CN) ₂ |
| 6 | Ag₁₂Py | Ag ₁₂ (Py) ₈ (SPr ⁱ) ₆ (tfa) ₆ |
| 7 | Ag₁₂SCH₂Ph | Ag ₁₂ (SCH ₂ Ph) ₆ (tfa) ₆ (CH ₃ CN) ₆ |
| 8 | Ag₇(Cyt) | [Ag ₇ (Cyt) ₈ (H ₂ O)](BF ₄) ₇ ·3Et ₂ O·2C ₂ H ₅ OH |
| 9 | Ag₆dfa | [Ag ₆ (dfa) ₂ (C≡C ^t Bu) ₄ (H ₂ O)·(CH ₃ CN)] _n |
| 10 | Ag₈C≡C^tBu | [Ag ₈ (tfa) ₃ (C≡C ^t Bu) ₅ (CH ₃ CN)] _n |
| 11 | Ag₁₇C≡CⁱPr | [Ag ₁₇ (tfa) ₉ (C≡C ⁱ Pr) ₈ (CH ₃ OH) ₃] _n |
| 12 | Ag₃SCH | [Ag ₃ (SCH) ₂ (tfa)] _n |
| 13 | Ag₅hfDa | [Ag ₅ (C≡C ^t Bu)(0.5hfDa) ₄ (CH ₃ CN) ₅] _n |
| 14 | Ag₁₁tfa | [Ag ₁₁ (tfa) ₆ (C≡C ^t Bu) ₅ (H ₂ O)(CH ₃ CN)] _n |
| 15 | Ag₁₂PMo₁₂ | [Ag ₁₂ (SPr ⁱ) ₆ (PMo ₁₂ O ₄₀) ₂ (CH ₃ CN) ₁₂] _n |
| 16 | Ag₁₅CN | [Ag ₁₅ (tfa) ₂ (C≡C ^t Bu) ₁₀ (μ ₂ C≡N) ₃] _n |
| 17 | Ag₁₂C≡C^tBu | {(Me ₄ N) ₂ [Ag ₁₂ (0.5hfDa) ₈ (C≡C ^t Bu) ₆]} _n |
| 18 | Ag₁₂SPrⁱ | [Ag ₁₂ (SPr ⁱ) ₆ (0.5hfDa) ₆ (CH ₃ CN) ₈] _n |
| 19 | Cl@Ag₁₆ | [(Cl)@Ag ₁₆ (SPr ⁱ) ₈ (tfa) ₇ (dppm) ₂ (CH ₃ OH)(H ₂ O)] ·2CH ₃ OH·CH ₃ CN |
| 20 | (CrO₄)@Ag₁₈ | [(CrO ₄)@Ag ₁₈ (C≡C ^t Bu) ₁₂ (tfa) ₄] |
| 21 | (SO₄)@Ag₁₈ | [(SO ₄)@Ag ₁₈ (C≡C ^t Bu) ₁₂ (tfa) ₄] |
| 22 | (Mo₂O₇)@Ag₂₄ | [(Mo ₂ O ₇)@Ag ₂₄ (C≡C ^t Bu) ₁₄ (tfa) ₆]·2H ₂ O·2CH ₃ CN |

| | | |
|----|---|--|
| 23 | (CrO₄)₂@Ag₂₈ | $[(\text{CrO}_4)_2@Ag_{28}(\text{C}\equiv\text{C}'\text{Bu})_{18}(\text{tfa})_6]\cdot 2\text{H}_2\text{O}$ |
| 24 | (MoO₄)₂@Ag₂₈ | $[(\text{MoO}_4)_2@Ag_{28}(\text{C}\equiv\text{C}'\text{Bu})_{18}(\text{tfa})_6]$ |
| 25 | (S)₂@Ag₂₈ | $[(\text{S})_2@Ag_{28}(\text{SPhPr}')_{22}(\text{dppp})_6](\text{OTf})_2\cdot 4\text{H}_2\text{O}\cdot 2\text{CH}_3\text{CN}$ |
| 26 | (PO₄)₂@Ag₃₁ | $[(\text{PO}_4)_2@Ag_{31}(\text{tfa})_7(\text{C}\equiv\text{C}'\text{Bu})_{18}(\text{CH}_3\text{CN})_2]\cdot 3\text{CH}_3\text{CN}\cdot \text{H}_2\text{O}$ |
| 27 | (CrO₄)₂@Ag₃₆ | $(\text{CrO}_4)_2@Ag_{36}(\text{tfa})_4(\text{C}\equiv\text{C}'\text{Bu})_{26}(\text{Cl})_2$ |
| 28 | (V₆O₁₈)@Ag₄₆ | $(\text{V}_6\text{O}_{18})@Ag_{46}(\text{dppp})_4(\text{SPh}'\text{Bu})_{36}(\text{OH})_4$ |
| 29 | (Cr₁₂O₃₆)@Ag₅₆ | $\text{Ag}_{56}\text{Cr}_{12}\text{O}_{36}(\text{tfa})_{16}(\text{SCH}_3\text{CHCH}_3)_{28}(\text{H}_2\text{O})_2\cdot 2\text{CH}_3\text{CN}$ |
| 30 | (C₄O₄)₂@Ag₂₄ | $[(\text{C}_4\text{O}_4^{2-})_2@Ag_{24}(\text{tfa})_4(\text{C}\equiv\text{C}'\text{Bu})_{16}]\cdot 2\text{CH}_3\text{CN}$ |
| 31 | (CCN)@Ag₃₆ | $\{[(\text{CCN}^{3-})(\text{CO}_3^{2-})_2\text{Ag}_{36}(\text{C}\equiv\text{C}'\text{Bu})_{24}\text{Cl}(\text{H}_2\text{O})_3]\cdot (\text{BF}_4)_4\}$ $\cdot 4\text{CH}_3\text{OH}\cdot 2\text{H}_2\text{O}$ |
| 32 | (CCN)@Ag₃₇ | $[(\text{CCN}^{3-})(\text{CO}_3^{2-})_3\text{Ag}_{37}(\text{C}\equiv\text{C}'\text{Bu})_{20}(\text{tfa})_8(\text{H}_2\text{O})]\cdot \text{CH}_3\text{OH}$ |
| 33 | Ag₄₂A | $[\text{Ag}_{42}(\text{C}\equiv\text{C}'\text{Bu})_{23}(\text{tfa})_8(\text{CCN}^{3-})(\text{CO}_3^{2-})_2]\cdot 3\text{MeCN}$ |
| 34 | Ag₄₂B | $[\text{Ag}_{42}(\text{C}\equiv\text{C}'\text{Bu})_{23}(\text{pfa})_8(\text{CCN}^{3-})(\text{CO}_3^{2-})_2]$ |

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